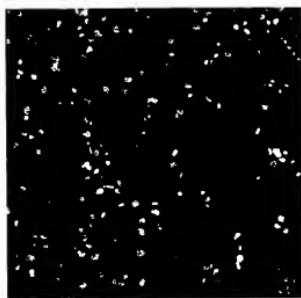


#4



Green Fluorescent Protein



Hoechst 33342 Stain

Figure 1

20110 "Z68Z660

Figure 2

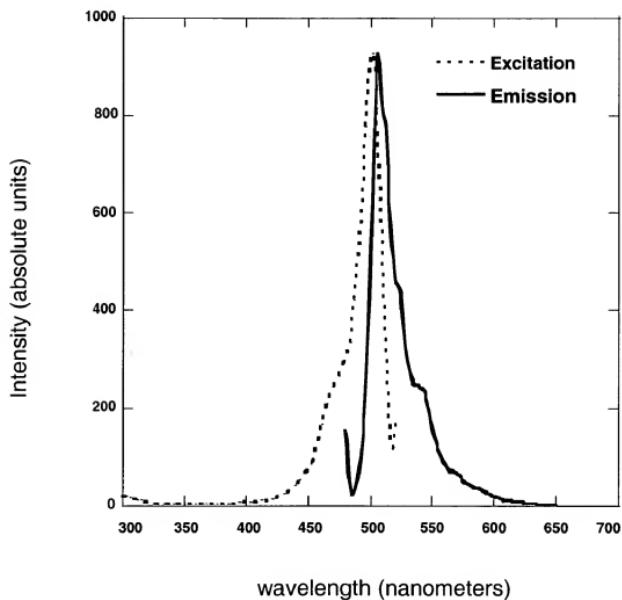
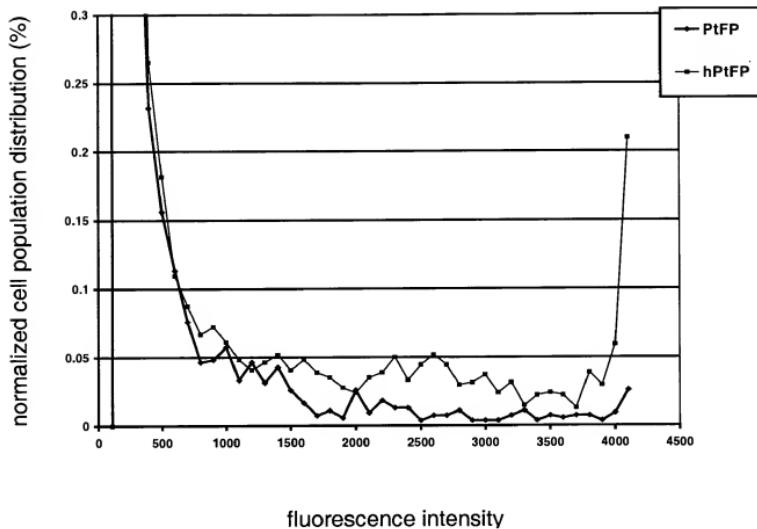
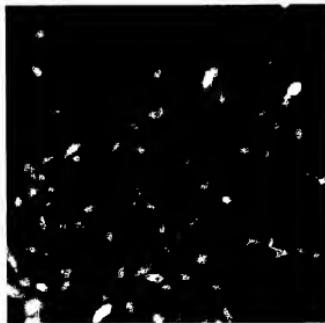


Figure 3



20110727632660

Figure 4

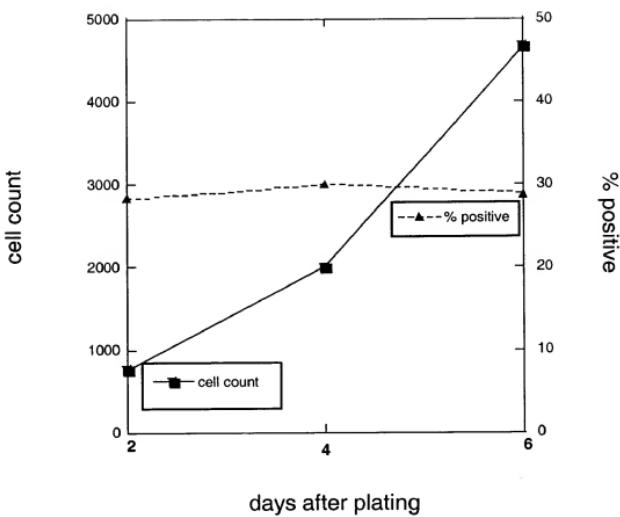


A549 cells



HEK 293 cells

Figure 5



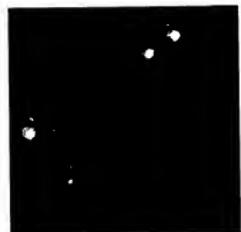
09977897 = 01.1.02

Figure 6

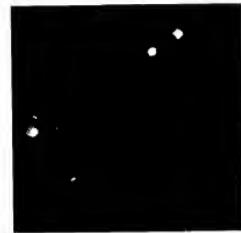
A



B



C



09077897 - 011102

Figure 7

Caspase-3 biosensor

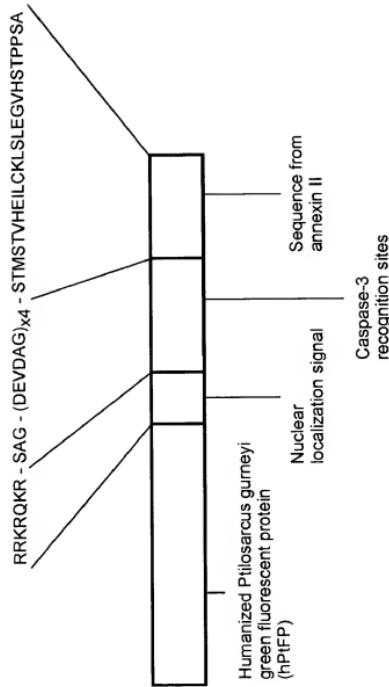
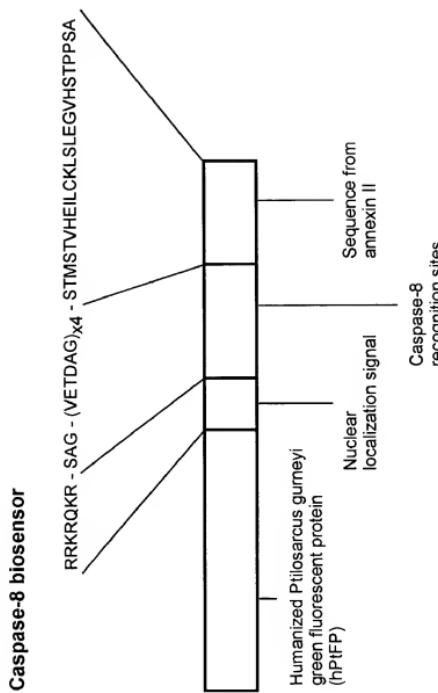


Figure 8



卷之三

Figure 9

2011/07/27 09:27:46

Figure 10

HindIII

```

+1   M   V   N   R   N   V   L   K   N   T   G
1 AAG CTT GCC ACC ATG GTG AAC CGG AAC GTG CTG AAG AAC ACC GGC
TTC GAA CGG TGG TAC CAC TTG GCC TTG CAC GAC TTC TTG TGG CGG

+1   L   K   E   I   M   S   A   K   A   S   V   E   G   I   V
46 CTG AAG GAG ATC ATG AGC GCC AAG GCC AGC GTG GAG GGC ATC GTG
GAC TTC CTC TAG TAC TCG CGG TTC CGG TCG CAC CTC CCG TAG CAC

+1   N   N   H   V   F   S   M   E   G   F   G   K   G   N   V
91 AAC AAC CAC CTG TTC AGC ATG GAG GGC TTC GGC AAG GGC AAC GTG
TTG TTG GTG CAC AAG TCG TAC CTC CCG AAG CGG TTC CCG TTG CAC

+1   L   F   G   N   Q   L   M   Q   I   R   V   T   K   G   G
136 CTG TTC GGC AAC CAG CTG ATG CAG ATC CGG GTG ACC AAG GGC GGC
GAC AAG CGG TTG GTC GAC TAC GTC TAG GCC CAC TGG TTC CCG CGG

+1   P   L   P   F   A   F   D   I   V   S   I   A   F   O   Y
181 CCT CTG CCC TTC GCC TTC GAC ATC GTG AGC ATC GCC TTC CAG TAC
GGA GAC GGG AAG CGG AAG CTG TAG CAC TCG TAG CGG AAG GTC ATG

+1   G   N   R   T   F   T   K   Y   P   D   D   I   A   D   Y
226 GGC AAC CGG ACC TTC ACC AAG TAT CCC GAC GAC ATC GCC GAC TAC
CCG TTG GCC TGG AAG TGG TTC ATA GGG CTG CTG TAG CGG CTG ATG

+1   F   V   Q   S   F   P   A   G   F   F   Y   E   R   N   L
271 TTC GTG CAG AGC TTC CCT GCC GGC TTC TTC TAC GAG CGG AAC CTG
AAG CAC GTC TCG AAG GGA CGG CGG AAG AAG ATG CTC GCC TTG GAC

+1   R   F   E   D   G   A   I   V   D   I   R   S   D   I   S
316 CGG TTC GAG GAC GGC GCC ATC GTG GAC ATC CGG AGC GAC ATC AGC
GCC AAG CTC CTG CCG CGG TAG CAC CTG TAG GCC TCG CTG TAG TCG

+1   L   E   D   D   K   F   H   Y   K   V   E   Y   R   G   N
361 CTG GAG GAC GAC AAG TTC CAC TAC AAG GTG GAG TAC CGC GGC AAC
GAC CTC CTG CTG TTC AAG GTG ATG TTC CAC CTC ATG GCG CGG TTG

+1   G   F   P   S   N   G   P   V   M   Q   K   A   I   L   G
406 GGC TTC CCT AGC AAC GGC CCT GTG ATG CAG AAG GCC ATC CTG GGC
CCG AAG GGA TCG TTG CGG GGA CAC TAC GTC TTC CGG TAG GAC CGG

+1   M   E   P   S   F   E   V   V   Y   M   N   S   G   V   L
451 ATG GAG CCC AGC TTC GAG GTG GTG TAC ATG AAC AGC GGC GTG CTG
TAC CTC CGG TCG AAG CTC CAC CAC ATG TAC TTG TCG CGG CAC GAC

+1   V   G   E   V   D   L   V   Y   K   L   E   S   G   N   Y
496 GTG GGC GAG GTG GAC CTG GTG TAC AAG CTG GAG AGC GGC AAC TAC
CAC CGG CTC CAC CTG GAC CAC ATG TTC GAC CTC TCG CGG TTG ATG

+1   Y   S   C   H   M   K   T   F   Y   R   S   K   G   G   V

```

Figure 10 (continued)

541 TAC AGC TGC CAC ATG AAG ACC TTC TAC CGG AGC AAG GGC GGC GTG
ATG TCG ACG GTG TAC TTC TGG AAG ATG GCC TCG TTC CCG CGG CAC

+1 K E F P E Y H F I H H R L E K
586 AAG GAG TTC CCT GAG TAC CAC TTC ATC CAC CAC CGG CTG GAG AAG
TTC CTC AAG GGA CTC ATG GTG AAG TAG GTG GTG GCC GAC CTC TTC

+1 T Y V E E G S F V E Q H E T A
631 ACC TAC GTG GAG GAG GGC AGC TTC GTG GAG CAG CAC GAG ACC GCC
TGG ATG CAC CTC CTC CCG TCG AAG CAC CTC GTC GTG CTC TGG CGG

+1 I A Q L T T I G K P L G S L H
676 ATC GCC CAG CTG ACC ACC ATC GGC AAG CCT CTG GGC AGC CTG CAC
TAG CGG GTC GAC TGG TGG TAG CCG TTC GGA GAC CCG TCG GAC GTG

NotI

+1 E W V *
721 GAG TGG GTG TAA AGC GGC CGC
CTC ACC CAC ATT TCG CCG GCG

The coding sequence (from start codon to stop codon):

atggtaaccggAACgtgctgaagaacacccggcgtgaaggagatcatgagcgccaag
gccAGCGTggaggGCATCgtgaacaaccacgtgttcAGCATGGAGGGCTTcgcaag
ggcaacgtgcgttgcggcaaccacgtgtcAGatcgAGatccgggtgACCAAGGGCGGCCt
ctggccCTTCGCTTcgacatcgAGatcgCCttccAGtACGGCAACCGGACCTtC
ACCAAGtATCCGACGACATCGCGACTACTCgtgcAGAGCTTCCtGCGCGCTtC
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atcAGCGTggaggACGACAAGTCCACTACAAAGGTggAGtACCGCGCAACGGCTtC
cctAGCAACGGCCCTgtatgcAGAGGCAATCTGGCATGGAGGCCAGTtCAG
gtggTgtACATGAACAGCGCGTGTGTTGGGCAAGGTggACtGTTGtACAAGtG
GAGAGCGGCAACTACTACAGtGCGCACATGAAGACCTtCtACCGGAGCAAGGGCGC
gtGAAGGAGtTCCtGAGtACCACTtCATCCACCAACCGGCTGAGAAGACCTACGtG
GAGGAGGGCAAGTtCgtggAGCAGCACGAGACCGCCATCGCCAGtGACCACCATC
ggCAAGCCTTGGCAGCCTGCAcGAGTGGGTGAA

Figure 11

09977897.011102

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Figure 12

Figure 13

hPtFP	Fluorescent?	Sequence	
		0	241
hPtFP	++++++	MVN RNV LKN TGL K E I M S A	Q L T T I G K P L G S L H E W V
TS1	+	MV L K N T G L K E I M S A	Q L T T I G K P L G S L H E W V
TS2	+	MV N T G L K E I M S A	Q L T T I G K P L G S L H E W V
TS3	+	MV G L K E I M S A	Q L T T I G K P L G S L H E W V
TS4	-	MV K E I M S A	Q L T T I G K P L G S L H E W V
TS5	+	MVN RNV LKN TGL K E I M S A	Q L T T I G K P L G S L
TS6	++	MVN RNV LKN TGL K E I M S A	Q L T T I G K P L
TS7	+	MVN RNV LKN TGL K E I M S A	Q L T T I G
TS8	+	MVN RNV LKN TGL K E I M S A	Q L T
TS9	+	MVN RNV LKN TGL K E I M S A	Q
TS10	-	MV G L K E I M S A	Q L T
TS11	-	MV K E I M S A	Q

Figure 14



no treatment



Staurosporine
10 nM 6 hours



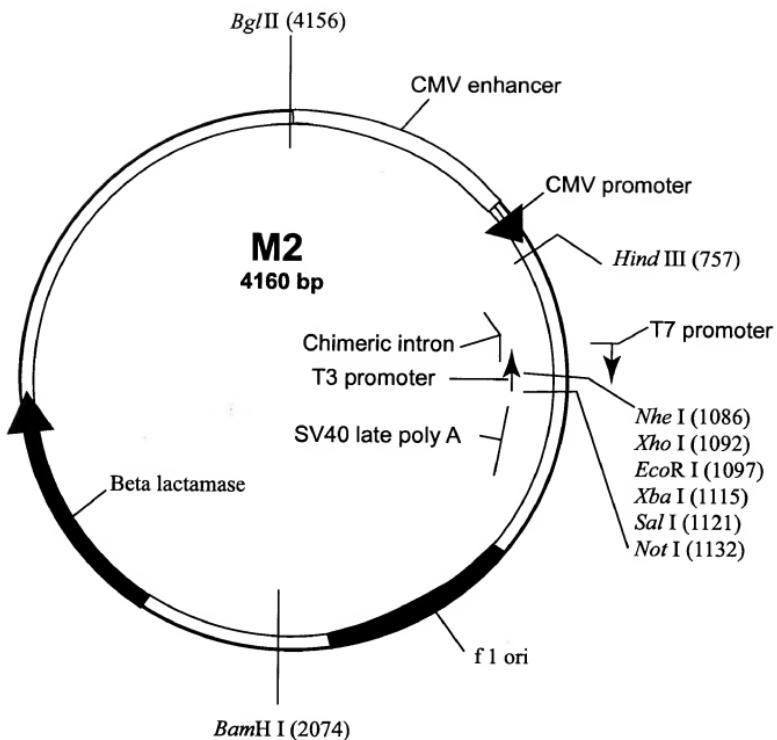
Staurosporine
1 nM 24 hours

09677897 - 011102

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UUC F 0.55 (225633)	UCC S 0.22 (192616)	UAC Y 0.57 (174805)	UGC C 0.55 (134523)
UUA L 0.07 (-79383)	UCA S 0.15 (128429)	UAA * 0.29 (- 8187)	UGA * 0.50 (- 14381)
UUG L 0.13 (115218)	UCG S 0.06 (- 48456)	UAG * 0.21 (- 5913)	UGG W 1.00 (142435)
CUU L 0.13 (139099)	CCU P 0.28 (189374)	CAU H 0.41 (113684)	CGU R 0.08 (- 51100)
CUC L 0.20 (210983)	CCC P 0.33 (219428)	CAC H 0.55 (162826)	CGC R 0.19 (118404)
CUA L 0.07 (-75667)	CCA P 0.27 (182506)	CAA Q 0.26 (138857)	CGA R 0.11 (68664)
CUG L 0.40 (435317)	CCG P 0.11 (- 76684)	CAG Q 0.74 (377806)	CGG R 0.21 (126679)
AUU I 0.35 (174021)	ACU T 0.24 (149780)	AAU N 0.46 (186915)	AGU S 0.15 (131222)
AUC I 0.49 (240138)	ACC T 0.36 (213626)	AAC N 0.54 (218376)	AGC S 0.24 (211962)
AUA I 0.16 (-78465)	ACA T 0.28 (163837)	AAA K 0.42 (262536)	AGA R 0.20 (125666)
AUG M 1.00 (244236)	ACG T 0.12 (- 69346)	AAG K 0.58 (359627)	AGG R 0.20 (123646)
GUU V 0.18 (119013)	GCU A 0.26 (202329)	GAU D 0.46 (245435)	GGU G 0.16 (118798)
GUC V 0.24 (160764)	GCC A 0.48 (310626)	GAC D 0.54 (287646)	GGC G 0.34 (258419)
GUA V 0.11 (-76398)	GCA A 0.23 (173819)	GAA E 0.42 (317763)	GGA G 0.25 (180935)
GUG V 0.47 (317359)	GCG A 0.11 (- 83647)	GAG E 0.58 (441298)	GGG G 0.25 (180691)

Figure 15

Figure 16



2021-10-07 16:56:00

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Figure 17

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Figure 17 (continued)

099アズモード・ヨルノミコ

Figure 18

